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# BMJ Open

## **Editors' individual conflicts of interest disclosure and journal transparency. A survey on high-impact medical specialty journals**

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2019-029796
Article Type:	Research
Date Submitted by the Author:	12-Feb-2019
Complete List of Authors:	Dal Re, Rafael; Health Research Institute-Fundacion Jimenez Diaz University Hospital, ; Caplan, Arthur; New York University School of Medicine, Medical Ethics Marusic, Ana; University of Split, Department of Research in Biomedicine and Health
Keywords:	conflicts of interest, editors, authors, medical journals, CIOMS, COPE

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Manuscripts

**Editors’ individual conflicts of interest disclosure and journal transparency. A survey on high-impact medical specialty journals**

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*No. of words: 2200.*

*No. of tables: 1*

## Abstract

**Objective:** to assess the fulfilment of authors' and editors' individual disclosure of potential conflicts of interest in a group of highly influential medicine journals across a variety of specialties.

**Design:** Cross sectional analysis.

**Setting and participants:** Top-ranked 5 journals as per 2017 JCR impact factor of 26 medical, surgery and imaging specialties.

**Interventions:** Observational analysis

**Primary and secondary outcome measures:** Percentage of journals requiring disclosure of authors' and editors' individual potential conflicts of interest. Journals that were listed as followers of the International Committee of Medical Journal Editors (ICMJE) Recommendations, members of the Committee of Publication Ethics (COPE) and linked to a third party (i.e., college, professional association/society, public institution).

**Results:** Although 99% (129/130) of journals required author's Col disclosure, only 12% (16/130) reported individual editors' potential Cols. Forty-five percent (58/130) of journals were followers of the ICMJE Recommendations, and 73% (95/130) were COPE members. Most (69%; 90/130) were linked to a college, professional society/association or public institution. Only 1 journal (*World Psychiatry*) did not have policies on individual authors' and editors' Col disclosure.

**Conclusion:** Very few high-impact medical journals disclosed their editorial teams' individual potential conflicts of interest –conversely, almost all required disclosure of authors' individual conflicts of interest. Journals followers of the ICMJE Recommendations should regularly disclosed the editors' individual conflicts of interest, as this is the only legitimate way to ask the same transparency of authors.

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**Strengths and limitations of this study**

- This is the first study comparing authors’ and editors’ individual disclosure of potential conflicts of interest in 130 leading journals from 26 medical specialties
- The limitation is that we did not assess a representative sample of the whole population of medical journals and we included only the information available in the public domain (journals’ websites).
- The results obtained in this study are probably an overestimation of how many journals require disclosure of authors’ and editors’ individual potential conflicts of interest.

On September 2018, The New York Times<sup>1</sup> published an important article about one of the most challenging and timely issues in clinical research: authors' disclosure of potential conflicts of interest (Col). The news referred to the chief medical officer of a highly respected US oncology center, who failed to disclose his financial ties with industry in many of his articles published in top medical journals, such as the *New England Journal of Medicine* and the *Lancet*. This news attracted considerable attention from both the lay press<sup>2,3</sup> and medical journals<sup>4,5</sup>. One month later, scientists from the same medical center updated their potential Col disclosures for more than 13 papers. Other top research institutes urged their staff to review the appropriateness of their Col disclosures<sup>6</sup>. This case illustrates what has been suspected for many years –that many researchers do not appropriately disclose their financial Col, as should be expected<sup>7</sup>, let alone disclose non-financial Col, about which there are differing opinions<sup>8</sup> and lack of clear policies in most medical journals<sup>9</sup>.

The implementation of the Sunshine Act in 2013 has allowed investigators to know all industry payments received by all physicians practicing in the US through the Centers For Medicare & Medicaid Services Open Payments Database (OPD; <https://www.cms.gov/openpayments/>). A study showed that 32% of oncologists working in the US and authors of clinical trials articles published in 6 highly-influential journals (4 oncology or hematology journals), failed to completely disclose industry payments from the company that sponsored the trials<sup>10</sup>. The *New England Journal of Medicine* and the *Lancet* were the journals with the highest proportions of oncologist authors with undisclosed payments, 46% and 37%, respectively<sup>10</sup>.

Although authors' failure to disclose potential Col is of grave concern, matters are worse when it comes to disclosure by editors and editorial teams. COPE supports that "editorial Col should be declared, ideally publicly"<sup>11</sup>. Furthermore, the International Committee of Medical Journal Editors (ICMJE) Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly state that editors should publish "regular disclosure statements" about their own

potential CoIs and those of their staff, and that guest editors should follow the same standards<sup>7</sup>. This policy, however, is almost never followed. The review of the information in English posted on the websites of the 14 journal members of the ICMJE, showed that only two of them (*PLOS Medicine*, *The BMJ*) published individual declarations on editors' potential CoIs<sup>12</sup>. A third ICMJE member journal (*Annals of Internal Medicine*) published editorial team members' potential CoIs in on-line published original research articles, special articles and reviews as "editors' disclosure" within the "author, article and disclosure information".

The aim of this study was to assess the fulfilment of authors' and editors' individual disclosure of potential CoI in a group of highly influential medicine journals across a variety of specialties

**Methods**

In November 2018 we searched policies on authors' and individual editors' potential CoI on the websites of high influential journals. These were the 5 top ranked journals according to their 2017 Journal Citation Report (JCR) impact factor, in 26 JCR's different categories (medicine, surgery and imaging specialties). The search was conducted by categories ordered in alphabetical order. If a journal was included in one category and was found to be in the top 5 of a subsequent category, the next journal of the top list of the latter category was included to avoid duplication of journals. This allowed to ensure the inclusion of 130 different journals. The following data were retrieved: journal name; 2017 impact factor; if the journal was linked to a third party, i.e., college, professional association or society or linked to a public institution; if the journal was included at the ICMJE website as a follower of the ICMJE Recommendations; and if the journal was included at the COPE (Committee for Publication Ethics) website as a member. In addition, at each journal website we searched if there were information regarding the requirement of author's individual CoI disclosure at the time of manuscript submission and whether the journal provided editors' individual CoI declarations. Data were retrieved by RDR;

a random sample of 25% of the 130 journals was assessed by AM to check consistency of the retrieved data.

Patients and public involvement: Neither patients nor any member of the public were involved in the creation of this study.

## Results

As shown in table 1, we found that 99% (129/130) of journals required authors' Col disclosure, but only 12% (16/130) reported individual editors' potential Cols. There were 10 categories having 1 journal reporting individual editor's potential Cols, and 3 (Gastroenterology & Hepatology, Oncology and Respiratory Medicine) with 2 journals providing this information. Half of the specialties (13/26) had no journal providing public disclosure of individual editors' Cols. Only 1 journal (*World Psychiatry*) did not have policies on individual authors' and editors' Col disclosure.

There were 58 journals (45%, 58/130) that were followers of the ICMJE Recommendations, and 73% (95/130) were COPE members. Thirty-eight (29.2%) were both followers of the ICMJE Recommendations and COPE members –4 of them belonging to Anesthesia. Six categories had no journals being both followers of the ICMJE Recommendations and COPE members. Fifteen journals (11.5%) –belonging to 11 categories– were neither followers of the ICMJE Recommendations nor COPE members. None of the 5 journals of Immunology or Oncology were followers of the ICMJE Recommendations, as well as none of the 5 Ophthalmology journals were COPE members

A majority of 69% (90/130) were linked to a college, professional society/association or public institution –7 categories with the 5 journals tied to a third party, whereas only one (Immunology) had the 5 journals with no link to a third party. The 2 journals that were linked to a public institution were Emerging Infectious Diseases (from the US Centers for Disease Control and Prevention, CDC) and Eurosurveillance (that belongs to the European Centre for Disease Prevention and Control, ECDC).



With regards to individual editors' Col declarations, we observed that journal members of COPE and/or of the ICMJE Recommendations subscribers were not better than other journals. Among those 16 journals that declared individual editors' Cols, 10 were both followers of the ICMJE Recommendations and COPE members; on the other extreme, the *Journal of Clinical Oncology*, neither was a follower of the ICMJE Recommendations nor was a member of COPE. None of the 22 journals belonging to the *Lancet*, *JAMA* or *Nature Reviews* journal groups reported individual editors' potential Col. Two journals belonging to the same group (*Journal of the American College of Cardiology* and *JACC: Cardiovascular Imaging*) were the only ones reporting the dollar amount received (modest or significant; threshold: 5,000\$) by each member of the editorial team. Finally, 4 journals belonging to the BMJ Group (*Annals of the Rheumatic Diseases*, *Gut*, *Journal of Neurology Neurosurgery and Psychiatry* and *Thorax*) reported Cols of one or few more editors –but not of all of them– whereas *The BMJ* reported individual potential Cols of all members of its editorial team.

**Discussion**

This study conducted on the 130 most influential medical journal of 26 medical specialties showed that although almost all (99%) required authors to disclose potential Cols at the time of manuscript submission, only 12% reported individual editors' potential Cols. This latter happened among journals that, in 88.5% of cases, were followers of the ICMJE Recommendations and/or COPE members, that recommend regular disclosure of this type of Col. The situation in the rest of journals that are included in the list of followers of the ICMJE Recommendations is even worse. A random sample of 350 journals showed that only 1% (2/350) of the journal websites had declarations on individual editors' potential Col, whereas 82% (287/350) required disclosure of authors' Col<sup>13</sup>. The US OPD has brought light to editors' Col by providing data on the payments by industry to journal editors working as clinicians in the US. In 2014, 51% and 20% of 713 of clinicians working as editors in 52 top medicine journals in 25 different specialties received general

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3 payments (eg, consultancy, honorariums, meals, travels) and research payments from industry,  
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5 respectively<sup>14</sup>. Although the monetary values varied substantially across specialties and  
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7 journals, there were 5 editors that received general payments between US\$325,000 and  
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9 US\$11 million in one year<sup>14</sup>. In 2015, 46% (320/703) of editors from 60 influential US journals  
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11 in 6 medical specialties received general payments from industry, of whom 48% (152/320)  
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13 received payments of more than US\$5,000 –the threshold considered significant by the NIH<sup>15</sup>.  
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15 So, we now know that about a half of the editors of well-respected US journals received  
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17 industry payments, but very few of them publicly disclosed these CoIs. Yet, the use of the US  
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19 OPD does not provide a definite picture since this database does not include payments to  
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21 physician members of company corporate boards or payments from companies whose  
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23 medicines have not been marketed<sup>16</sup>.  
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28 The situation in the EU is unknown. For example, France, Latvia and Portugal have regulations  
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30 mandating the transparent reporting of payments by industry to healthcare professionals<sup>17</sup>. In  
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32 other EU countries, including Germany, Italy, Spain, Sweden, the Netherlands and the UK,  
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34 industry self-regulations are in place<sup>17</sup>, that present specific characteristics. Thus, for instance,  
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36 in Spain each company reports their own payments to individual health professionals on their  
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38 own websites, which makes research on the adequacy of disclosure difficult and unreliable. In  
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40 the UK there is a single database -belonging to the Association of the British Pharmaceutical  
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42 Industry-, but healthcare professionals must consent to have their names reported: the  
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44 consent rate was only 65% in 2016<sup>18</sup>. Consent is also needed in Germany, Italy and Sweden<sup>17</sup>.  
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49 If not disclosing all authors potential CoI in journal articles is ethically unacceptable, such  
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51 behavior is worse when dealing with authors of clinical practice guidelines, that are commonly  
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53 suggested by professional societies/associations and governmental bodies to be followed by  
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55 practicing physicians. A remarkable percentage of CoIs disclosure of authors of highly  
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57 respected professional associations' clinical practice guidelines were inaccurate or were simply  
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3 lacking<sup>19-21</sup>. Proposals for full transparent and comprehensive potential Col disclosure and to  
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5 prevent inconsistent reporting of author's Cols disclosures have been put forward<sup>22,23</sup>.  
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7 However, the current practice of disclosure by filling in standard forms in each paper does not  
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9 seem to be effective in increasing Col transparency, since 61% of authors had at least one  
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11 industry payment type not disclosed with a submitted article<sup>24</sup>.  
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15 It has been observed that physicians accepting inexpensive meals from pharma companies  
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17 prescribe more brand names medicines<sup>25</sup>, and that greater payments were associated with  
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19 greater proportion of branded prescriptions<sup>26</sup>. What might be expected from editors that  
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21 receive industry payments and could be involved in assessing manuscripts of industry-  
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23 sponsored trials? The ICMJE Recommendations state that editors should recuse themselves  
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25 from editorial decisions when they have potential Cols<sup>7</sup>. So, authors and readers have to  
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27 presume that this happens if this is a journal's policy. Unfortunately, only 57% (34/60) of  
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29 influential US journals<sup>27</sup> and 18% of journals listed as followers of the ICMJE  
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31 Recommendations<sup>13</sup> have a publicly available editor's Col policy. So, in the best-case scenario,  
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33 where all journals with editors' Col policy have a recusal statement included in this policy and  
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35 is always followed, there is still a risk that editors of many journals with industry ties could take  
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37 editorial decisions with manuscripts for which they have a conflict.  
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42 While many journals have addressed the disclosure of authors' potential Col disclosure, few  
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44 have had a similar approach to editors' Cols. The decision taken by editors of 18 orthopedic  
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46 journals to agreeing to use the ICMJE form for disclosing authors' Cols from 2011 onwards is  
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48 laudable<sup>28</sup>, but as of January 2019 there has not been any such an agreement regarding  
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50 editors' individual potential Col disclosure. Similarly, Nature Research journals<sup>29</sup> and JAMA  
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52 Network journals<sup>5</sup> have recently readdressed their authors' potential Col disclosure  
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54 requirements but have not done the same with editors' individual disclosures.  
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3 The limitations of this study are that all information was retrieved from journals that lead their  
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5 respective medical specialties and logically the number was relatively small. However, and as  
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7 mentioned above with respect to the percentage of ICMJE Recommendations followers that  
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9 declared the individual authors' and editors' Col, we should foresee that among all medical  
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11 journals the percentage that require disclosure of these ColS will be much smaller.  
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15 It is paradoxical that many journals ask for full authors' Col disclosure, whereas almost all of  
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17 them provide no publicly available information on their editors' potential ColS. The 14 ICMJE  
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19 member journals should lead the way in adhering to their own policies. This would mean that  
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21 *JAMA* and *Lancet* would likely have their sister journals to follow the same policy, which would  
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23 almost double (up to 23%) the percentage of journals in Table 1 fulfilling the disclosure of  
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25 individual editorial teams' potential Col. But this is not enough. Journals that belong to  
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27 professional societies/associations should also disclose their editorial teams' individual  
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29 potential Col: this is the only legitimate way to ask the same transparency of authors. Finally,  
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31 all journals that are listed as followers of the ICMJE Recommendations should behave  
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33 accordingly and report their editors' individual potential Col.  
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38 The publication process –as a critical part of the scientific enterprise– should be based on the  
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40 honest behavior of all agents involved. Journals editorial teams are a key player that should  
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42 apply to themselves the transparency they demand their authors.  
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**Authors’ contributions**

RDR conceived the idea and wrote the first draft of the manuscript. ALC and AM provided comments and edits throughout the drafting process for important intellectual content. All authors approved the final version of the manuscript and are accountable for all aspects included in it. The authors assume full responsibility for the accuracy and completeness of the data and ideas presented.

**Funding**

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors

**Competing interests**

All authors declare that have neither financial nor non-financial interests that may be relevant to the submitted work. AM declares that she participated in the creation of the ICMJE Form for Disclosure of Potential Conflicts of Interest.

**Data sharing**

All data are provided in Table 1

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For peer review only

Table 1.- Authors' requirements and provision of editors' individual conflicts of interest (Col) disclosures in the websites of the 5 top ranked journals of 26 categories as per 2017 JCR impact factor (IF) and their link to a third party. Inclusion of journals in the ICMJE recommendations list of followers and as COPE members (as of 14 November 2018)

JCR Category	Journal	2017 IF	Linked <sup>a</sup> to a college, professional association / society or public institution	ICMJE recommendations follower <sup>b</sup>	COPE member <sup>b</sup>	Author's Col individual disclosure required	Editor's Col individual declaration provided
Allergy	Journal of Clinical Allergy and Clinical Immunology	13.3	Yes	Yes	Yes	Yes	No
	Journal of Clinical Allergy and Clinical Immunology in Practice	7.0	Yes	No	Yes	Yes	No
	Clinical Reviews in Allergy & Immunology	6.1	No	No	Yes	Yes	No
	Allergy	6.0	Yes	No	Yes	Yes	No
	World Allergy Organization Journal	5.7	Yes	No	Yes	Yes <sup>i</sup>	No
Anesthesiology	Anesthesiology	6.5	Yes	No	Yes	Yes	Yes
	British Journal of Anaesthesia	6.5	Yes	Yes	Yes	Yes	No
	Pain	5.6	Yes	Yes	Yes	Yes	No
	Anaesthesia	5.4	Yes	Yes	Yes	Yes	No
	Regional Anesthesia and Pain Medicine	4.7	Yes	Yes	Yes	Yes <sup>j</sup>	No
Cardiology & Cardiovascular Systems	European Heart Journal	23.4	Yes	Yes	Yes	Yes	No
	Circulation	18.9	Yes	Yes	No	Yes	No
	Journal of the American College of Cardiology	16.8	Yes	Yes	Yes	Yes	Yes <sup>k</sup>
	Circulation Research	15.2	Yes	No	Yes	Yes	No
	Nature Reviews Cardiology	15.2	No	No	Yes	Yes	No
Clinical Neurology	Lancet Neurology	27.1	No	No	Yes	Yes	No
	Nature Reviews Neurology	19.8	No	No	Yes	Yes	No
	Acta Neuropathologica	15.9	No	No	No	Yes	No

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	Alzheimers & Dementia	12.8	Yes	No	Yes	Yes	No
	JAMA Neurology	11.5	Yes	Yes	No	Yes	No
Critical Care Medicine	Lancet Respiratory Medicine	21.5	No	No	Yes	Yes	No
	American Journal of Respiratory and Critical Care Medicine	15.2	No	Yes	Yes	Yes	Yes
	Intensive Care Medicine	15.0	Yes	No	Yes	Yes	No
	Chest	7.7	Yes	Yes	Yes	Yes	No
	Critical Care Medicine	6.6	Yes	No	Yes	Yes	No
Dermatology	JAMA Dermatology	8.1	Yes	Yes	No	Yes	No
	Journal of the American Academy of Dermatology	6.9	Yes	Yes	Yes	Yes	No
	Journal of Investigative Dermatology	6.4	Yes	No	Yes	Yes	No
	British Journal of Dermatology	6.1	Yes	No	Yes	Yes	No
	Pigment Cell & Melanoma Research	6.1	Yes	No	Yes	Yes	No
Endocrine & Metabolism	Cell Metabolism	20.6	No	No	Yes	Yes	No
	Nature Reviews Endocrinology	20.3	No	No	Yes	Yes	No
	Lancet Diabetes & Endocrinology	19.3	No	No	Yes	Yes	No
	Endocrine Reviews	15.6	Yes	No	Yes	Yes <sup>i</sup>	No
	Diabetes care	13.4	Yes	Yes	Yes	Yes	No
Gastroenterology & Hepatology	Gastroenterology	20.8	Yes	Yes	Yes	Yes	Yes
	Nature Reviews Gastroenterology & Hepatology	17.3	No	No	Yes	Yes	No
	Gut	17.0	No	Yes	Yes	Yes	Yes <sup>l</sup>
	Journal of Hepatology	15.0	Yes	Yes	Yes	Yes	No
	Hepatology	14.1	Yes	No	No	Yes	No
Hematology	Blood <sup>c</sup>	15.1	Yes	Yes	Yes	Yes	Yes
	Lancet Haematology	10.7	No	No	No	Yes	No
	Leukemia	10.0	No	No	Yes	Yes	No
	Haematologica	9.1	Yes	Yes	No	Yes	No
	Journal of Hematology & Oncology	7.3	Yes	No	Yes	Yes <sup>i</sup>	No

Immunology	Nature Reviews Immunology	42.0	No	No	Yes	Yes	No
	Annual Review of Immunology	22.7	No	No	No	Yes <sup>i</sup>	No
	Nature Immunology	21.8	No	No	Yes	Yes <sup>i</sup>	No
	Immunity	19.7	No	No	Yes	Yes	No
	Trends in Immunology	14.2	No	No	No	Yes	No
Infectious Diseases	Lancet Infectious Diseases	25.1	No	No	Yes	Yes	No
	Lancet HIV	11.4	No	No	No	Yes	No
	Clinical Infectious Diseases	9.1	Yes	Yes	Yes	Yes	No
	Emerging Infectious Diseases	7.4	Yes	Yes	No	Yes	No
	Eurosurveillance	7.1	Yes	Yes	No	Yes	No
Medicine General & Internal	New England Journal of Medicine	79.3	Yes	Yes <sup>h</sup>	Yes	Yes	No
	Lancet	53.3	No	Yes <sup>h</sup>	Yes	Yes	No
	JAMA	47.7	Yes	Yes <sup>h</sup>	No	Yes	No
	BMJ	23.6	Yes	Yes <sup>h</sup>	Yes	Yes	Yes
	JAMA Internal Medicine	20.0	No	Yes	No	Yes	No
Obstetrics & Gynecology	Human Reproduction Update	11.9	Yes	No	Yes	Yes	No
	American Journal of Obstetrics and Gynecology	5.7	Yes	Yes	Yes	Yes	No
	Ultrasound in Obstetrics & Gynecology	5.7	Yes	No	Yes	Yes	No
	Human Reproduction	5.0	Yes	No	Yes	Yes	No
	Obstetrics and Gynecology	5.0	Yes	No	Yes	Yes	No
Oncology	CA-A Cancer Journal for Clinicians	244.6	Yes	No	Yes	Yes	Yes
	Nature Reviews Cancer	42.8	No	No	Yes	Yes	No
	Lancet Oncology	36.4	No	No	Yes	Yes	No
	Journal of Clinical Oncology	26.4	Yes	No	No	Yes	Yes
	Nature Reviews Clinical Oncology	24.7	No	No	Yes	Yes	No
Ophthalmology	Progress in Retinal and Eye Research	11.7	No	No	No	Yes	No
	Ophthalmology	7.5	Yes	Yes	No	Yes	No
	JAMA Ophthalmology	6.7	Yes	Yes	No	Yes	No
	Ocular Surface	5.5	No	No	No	Yes	No

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Orthopedics	Annual Review of Vision Science	5.1	No	No	No	Yes <sup>i</sup>	No
	American Journal of Sports Medicine	6.1	Yes	No	Yes	Yes	No
	Osteoarthritis and Cartilage	5.5	Yes	Yes	Yes	Yes	No
Pediatrics	Journal of Bone and Joint Surgery - American Volume	4.6	No	No	Yes	Yes	Yes
	Journal of Physiotherapy	4.5	Yes	Yes	Yes	Yes	No
	Arthroscopy	4.3	Yes	No	No	Yes	No
	JAMA Pediatrics	10.8	Yes	Yes	No	Yes	No
	Journal of the American Academy of Child and Adolescent Psychiatry	6.2	Yes	Yes	Yes	Yes	No
Peripheral Vascular Diseases	Pediatrics	5.5	Yes	Yes	Yes	Yes	No
	Pediatric Allergy and Immunology	4.1	Yes	No	Yes	Yes	No
	Journal of Adolescent Health	4.1	Yes	No	Yes	Yes	No
	Hypertension <sup>d</sup>	6.8	Yes	Yes	Yes	Yes	No
	Stroke	6.2	Yes	Yes	Yes	Yes	No
Primary Health Care	Arteriosclerosis thrombosis and Vascular Biology	6.1	Yes	No	Yes	Yes	No
	Thrombosis and Haemostasis	5.0	Yes	Yes	No	Yes	No
	Journal of Thrombosis and Haemostasis	4.9	Yes	Yes	Yes	Yes	No
	Annals of Family Medicine	4.5	Yes	Yes	No	Yes	No
	British Journal of General Practice	3.3	Yes	No	Yes	Yes	No
	Journal of the American Board of Family Medicine	2.5	Yes	Yes	No	Yes	No
Psychiatry	npj Primary Care Respiratory Medicine	2.5	Yes	No	Yes	Yes	No
	BMC Family Practice	2.0	No	No	Yes	Yes <sup>i</sup>	No
	World Psychiatry	30.0	Yes	No	No	No	No
	JAMA Psychiatry	16.6	Yes	Yes	No	Yes	No
	Lancet Psychiatry	15.2	No	No	Yes	Yes	No
	American Journal of Psychiatry	13.4	Yes	Yes	No	Yes	No
	Psychotherapy and Psychosomatics	13.1	No	Yes	No	Yes	No

Public, Environmental & Occupational Health	Lancet Global Health	18.7	No	No	Yes	Yes	No
	MMRW- Morbidity and Mortality Weekly Report	12.9	Yes	No	No	Yes	No
	Annual Review of Public Health	9.4	No	No	No	Yes <sup>i</sup>	No
	Environmental Health Perspectives	8.4	Yes	No	Yes	Yes	No
	International Journal of Epidemiology	8.4	Yes	Yes	Yes	Yes	No
Radiology, Nuclear Medicine & Medical Imaging	JACC-Cardiovascular Imaging	10.2	Yes	No	Yes	Yes	Yes <sup>k</sup>
	European Heart Journal-Cardiovascular Imaging	8.3	Yes	No	Yes	Yes	No
	European Journal of Nuclear Medicine and Molecular Imaging	7.7	Yes	No	Yes	Yes	No
	Radiology	7.5	Yes	Yes	No	Yes	No
	Journal of Nuclear Medicine	7.4	Yes	No	No	Yes	No
Respiratory System	European Respiratory Journal <sup>e</sup>	12.2	Yes	Yes	Yes	Yes	Yes
	Journal of Thoracic Oncology	10.3	Yes	No	Yes	Yes <sup>i</sup>	No
	Thorax	9.7	Yes	Yes	Yes	Yes	Yes <sup>m</sup>
	Journal of Heart and Lung Transplantation	8.0	Yes	No	Yes	Yes	No
	Journal of Thoracic and Cardiovascular Surgery	4.9	Yes	Yes	Yes	Yes	No
Rheumatology	Nature Reviews Rheumatology	15.7	No	No	Yes	Yes	No
	Annals of the Rheumatic Diseases	12.4	Yes	Yes	Yes	Yes	Yes <sup>l</sup>
	Arthritis & Rheumatology	7.8	Yes	No	Yes	Yes	No
	Rheumatology <sup>f</sup>	5.2	Yes	Yes	Yes	Yes	No
	Seminars in Arthritis and Rheumatism	4.4	No	No	Yes	Yes	No
Surgery	Annals of Surgery	9.2	Yes	Yes	Yes	Yes	No
	JAMA Surgery	8.5	Yes	Yes	No	Yes	No
	Journal of Neurology Neurosurgery and Psychiatry <sup>g</sup>	7.1	No	Yes	Yes	Yes	Yes <sup>l</sup>
	Endoscopy	6.6	No	Yes	No	Yes	No
	American Journal of Transplantation	6.5	Yes	Yes	Yes	Yes	No

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Urology & Nephrology	European Urology	17.6	Yes	Yes	Yes	Yes	Yes
	Nature Reviews Nephrology	14.1	No	No	Yes	Yes	No
	Journal of the American Society of Nephrology	8.7	Yes	Yes	Yes	Yes	No
	Kidney International	8.4	Yes	No	Yes	Yes	No
	Nature Reviews Urology	8.1	No	No	Yes	Yes	No

- (a) Official journal, or affiliated to or published by or on behalf of; (b) Website information; (c) The journal ranked as # 1 is Circulation Research which is included in Cardiology & Cardiovascular Systems; (d) Journals ranked as # 1 and 2 are Circulation and Circulation Research which are included in Cardiology & Cardiovascular Systems; (e) The journals ranked as #1 and #2 are Lancet Respiratory Medicine and American Journal of Respiratory and Critical Care Medicine, which are included in Critical Care Medicine; (f) The journal ranked as #4 is Osteoarthritis and Cartilage, which included in Orthopedics; (g) The journal ranked as # 3 is Journal of Heart and Lung Transplantation which is included in Respiratory System; (h) ICMJE member journal; (i) Available through the editorial group websites (eg Annual Review author resource center; BMC editorial policies; Endocrine society; Nature authors & editors policies); (j) Available through the submission service site; (k) Including amount of US\$ (modest ≤ 5,000 \$, or significant ≥5,000 \$); (l) Only that of the editor (s) but no information is provided regarding deputy editors and associate editors; (m) Only of some editors but not from all members of the editorial team.

# BMJ Open

## Editors' and authors' individual conflicts of interest disclosure and journal transparency. A study of high-impact medical specialty journals

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2019-029796.R1
Article Type:	Research
Date Submitted by the Author:	16-Apr-2019
Complete List of Authors:	Dal Re, Rafael; Health Research Institute-Fundacion Jimenez Diaz University Hospital, ; Caplan, Arthur; New York University School of Medicine, Medical Ethics Marusic, Ana; University of Split, Department of Research in Biomedicine and Health
<b>Primary Subject Heading</b>:	Medical publishing and peer review
Secondary Subject Heading:	Ethics
Keywords:	conflicts of interest, editors, authors, medical journals, CIOMS, COPE

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**Editors’ and authors’ individual conflicts of interest disclosure and journal transparency. A study of high–impact medical specialty journals**

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*No. of words: 2200.*

*No. of tables: 1*

## Abstract

**Objective:** To assess the fulfilment of authors' and editors' individual disclosure of potential conflicts of interest in a group of highly influential medicine journals across a variety of specialties.

**Design:** Cross sectional analysis.

**Setting and participants:** Top-ranked 5 journals as per 2017 JCR impact factor of 26 medical, surgery and imaging specialties.

**Interventions:** Observational analysis

**Primary and secondary outcome measures:** Percentage of journals requiring disclosure of authors' and editors' individual potential conflicts of interest. Journals that were listed as followers of the International Committee of Medical Journal Editors (ICMJE) Recommendations, members of the Committee of Publication Ethics (COPE) and linked to a third party (i.e., college, professional association/society, public institution).

**Results:** Although 99% (129/130) of journals required author's Col disclosure, only 12% (16/130) reported individual editors' potential Cols. Forty-five percent (58/130) of journals were followers of the ICMJE Recommendations, and 73% (95/130) were COPE members. Most (69%; 90/130) were linked to a college, professional society/association or public institution. Only one journal did not have policies on individual authors' and editors' Col disclosure.

**Conclusion:** Very few high-impact medical journals disclosed their editorial teams' individual potential conflicts of interest –conversely, almost all required disclosure of authors' individual conflicts of interest. Journal followers of the ICMJE Recommendations should regularly disclose the editors' individual conflicts of interest, as this is the only legitimate way to ask the same transparency of authors.

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**Strengths and limitations of this study**

- This is the first study comparing authors’ and editors’ individual disclosure of potential conflicts of interest in 130 leading journals from 26 medical specialties
- A limitation is that we did not assess a representative sample of the whole population of medical journals. Also, we included only the information available in the public domain (journals’ websites).
- The results obtained in this study may be an overestimation of how many journals require and comply with disclosure of authors’ and editors’ individual potential conflicts of interest.

On September 2018, The New York Times<sup>1</sup> published an important article about one of the most challenging and timely issues in clinical research: authors' disclosure of potential conflicts of interest (Col). The news referred to the chief medical officer of a highly respected US oncology center. He had failed to disclose his financial ties with industry in many of his articles published in high-impact factor medical journals, such as the *New England Journal of Medicine* and the *Lancet*. This news attracted considerable attention from both the lay press<sup>2,3</sup> and medical journals<sup>4,5</sup>. One month later, scientists from the same medical center updated their potential Col disclosures for more than 13 papers. Other top research institutes urged their staff to review the appropriateness of their Col disclosures<sup>6</sup>. This case illustrates what has been suspected for many years –that many researchers do not appropriately disclose their financial Col, as should be expected<sup>7</sup>, let alone disclose non-financial Col, about which there are differing opinions<sup>8</sup> and lack of clear policies in most medical journals<sup>9</sup>.

The implementation of the Sunshine Act in the USA in 2013 reveals all industry payments received by all physicians practicing in the US through the Centers For Medicare & Medicaid Services Open Payments Database (OPD; <https://www.cms.gov/openpayments/>). A study showed that 32% of oncologists working in the US and authors of clinical trials articles published in 6 highly-influential journals (4 oncology or hematology journals), failed to completely disclose industry payments from the company that sponsored the trials<sup>10</sup>. The *New England Journal of Medicine* and the *Lancet* were the journals with the highest proportions of oncologist authors with undisclosed payments, 46% and 37%, respectively<sup>10</sup>.

Although authors' failure to disclose potential Col is of grave concern, matters are worse when it comes to disclosure by editors and editorial teams. COPE (Committee on Publication Ethics) –a highly respected professional committee providing leadership to editors, publishers and individuals on ethical publishing practices– recommends that “editorial Col should be declared, ideally publicly”<sup>11</sup>. Furthermore, the International Committee of Medical Journal Editors

(ICMJE) Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals –which are followed by thousands of scholarly journals– state that editors should publish “regular disclosure statements” about their own potential CoIs and those of their staff, and that guest editors should follow the same standards<sup>7</sup>. This policy, however, is almost never followed. A review of the information in English posted on the websites of the 14 journal members of the ICMJE, showed that only two of them (*PLOS Medicine*, *The BMJ*) published individual declarations on editors’ potential CoIs<sup>12</sup>. A third ICMJE member journal (*Annals of Internal Medicine*), published its editorial team members’ potential CoIs in on-line published original research articles, special articles and reviews as “editors’ disclosure” within the “author, article and disclosure information”.

Practicing physicians working as journal editors may receive industry payments and, hence, these financial CoIs should be disclosed to readers. Thanks to the OPD data, we know that close to 50% of US clinicians belonging to editorial teams in top-ranked medicine journals have received payments from industry<sup>13–15</sup>.

The aim of this study was to assess the fulfilment of authors’ and editors’ individual disclosure of potential CoI in a group of highly influential medicine journals across a variety of specialties.

**Methods**

In November 2018 we searched the websites of highly influential journals for the policies on authors’ and individual editors’ potential CoI. These were the 5 top ranked journals according to their 2017 Journal Citation Report (JCR) impact factor, in each of 26 different JCR categories within medicine, surgery and imaging. The search was conducted by alphabetical order of the JCR categories. If a journal was included in one category and was found to be in the top 5 of a subsequent category, the next journal of the top list of the latter category was included to avoid duplication. This resulted in the inclusion of 130 different journals.

The following data were retrieved: journal name; 2017 impact factor; journal link to a third party, i.e., college, professional association or society or linked to a public institution, since this indicated the responsibility of a non-commercial organization for a journal; if the journal was included at the ICMJE website as a follower of the ICMJE Recommendations; and if the journal was included on the COPE (Committee for Publication Ethics) website as a member. A quality check process is required for COPE membership, but not for ICMJE Recommendations listing.

In addition, at each journal website we searched if there were information for author's individual Col disclosure at the time of manuscript submission and whether the journal provided individual editorial Col declarations. This included all usual editorial positions, such as editors-in-chief, executive editors, deputy editors, and associate editors or their equivalent. We presumed that these job positions would be involved in the editorial decision-making process. Data were retrieved by one of the authors, RDR; all the information from a random sample of 25% of the 130 journals was assessed by another author, AM, to check consistency of the retrieved data.

Patients and public involvement: Neither patients nor any member of the public were involved in this study.

## Results

As shown in table 1, 99% (129/130) of journals required authors' Col disclosure, but only 12% (16/130) reported individual editors' potential Cols. Out of 26 categories, there were 10 categories with one journal reporting individual editor's potential Cols, and three other categories (Gastroenterology & Hepatology, Oncology and Respiratory Medicine) with two journals providing this information. Half of the categories (13/26) had no journal providing public disclosure of individual editors' Cols. Only one journal (*World Psychiatry*) did not have policies on both authors' and editors' individual Col disclosure. Out of 130 journals in the sample, 58 (45%) were listed on the ICMJE Recommendations subscription list, and 95 (73%) were COPE members. Thirty-eight (29.2%) were both ICMJE Recommendations subscribers

and COPE members –four of them belonging to Anesthesia. Six categories had no journals subscribed to both ICMJE Recommendations and COPE. Fifteen journals (11.5%) –belonging to 11 categories– were neither followers of the ICMJE Recommendations nor COPE members. None of the five journals in the Immunology or Oncology categories were followers of the ICMJE Recommendations. None of the five Ophthalmology journals were COPE members. A majority of journals in the sample (69%; 90/130) were linked to a college, professional society/association or public institution. Seven of the 26 categories had all five journals tied to a third party, whereas only one (Immunology) had five journals with no link to a third party. The two journals that were linked to a public institution were Emerging Infectious Diseases (from the US Centers for Disease Control and Prevention, CDC) and Eurosurveillance (that belongs to the European Centre for Disease Prevention and Control, ECDC). With regards to individual editors’ Col declarations, journal members of COPE and/or of the ICMJE Recommendations subscribers were not better in disclosures than other journals. Among those 16 journals that declared individual editors’ Cols, ten were both followers of the ICMJE Recommendations and COPE members; the *Journal of Clinical Oncology*, was neither a follower of the ICMJE Recommendations nor was a member of COPE. None of the 22 journals listed in table 1 belonging to the *Lancet*, *JAMA* or *Nature Reviews* journal groups reported individual editors’ potential Col. Two journals belonging to the same group (*Journal of the American College of Cardiology* and *JACC: Cardiovascular Imaging*) were the only ones reporting the dollar amount received (modest or significant; threshold: 5,000\$) by each member of the editorial team. Finally, four journals belonging to the BMJ Group reported Cols for one (*Annals of the Rheumatic Diseases*, *Gut*, and *Journal of Neurology Neurosurgery*) or three (*Thorax*) editors –but not of all of them– whereas *The BMJ* reported individual potential Cols for all members of its editorial team.

**Discussion**

This study conducted on 130 high-impact medical journals from 26 medical JCR categories showed that although almost all (99%) required authors to disclose potential CoIs at the time of manuscript submission, only 12% reported individual editors' potential CoIs. This latter happened among journals that, in 88.5% of cases, were followers of the ICMJE Recommendations and/or COPE members, which recommend regular disclosure of editorial CoI.

The situation in the rest of the thousands of journals that are included in the list of followers of the ICMJE Recommendations is even worse. We have shown previously that in a random sample of 350 journals only 1% (2/350) of the journal websites had declarations on individual editors' potential CoIs, whereas 82% (287/350) required disclosure of authors' CoIs<sup>16</sup>. The US OPD has shed light on editors' CoI by providing data on the payments by industry to journal editors also working as clinicians in the US. In 2014, 51% and 20% of 713 of clinicians working as editors in 52 top medicine journals in 25 different specialties received general payments (eg, consultancy, honorariums, meals, travel) and research payments from industry, respectively<sup>13</sup>. Although the monetary values varied substantially across specialties and journals, there were five editors that received general payments between US\$325,000 and US\$11 million in one year<sup>13</sup>. In 2015, 46% (320/703) of editors from 60 influential US journals in 6 medical specialties received general payments from industry, of whom 48% (152/320) received payments of more than US\$5,000 –the threshold considered significant by the NIH<sup>14</sup>. In 2013–2016, 42% (141/333) of US-based physician–editors working in 35 journals with the highest number of citations in 2015 in seven medical specialties, received industry payments within any given year<sup>15</sup>. Median general payments to editors were mostly higher compared to all physicians within the same specialty<sup>15</sup>. Close to half of the editors of well-respected US journals received industry payments, but very few of them publicly disclosed them. However, the use of the US OPD does not provide a complete picture since this database does not



include payments to physician members of company corporate boards or payments from companies whose products have not been marketed<sup>17</sup>.

The situation in the EU is unknown. For example, France, Latvia and Portugal have regulations mandating the transparent reporting of payments by industry to healthcare professionals<sup>18</sup>. In other EU countries, including Germany, Italy, Spain, Sweden, the Netherlands and the UK, industry self-regulations are in place<sup>18</sup>, that present specific characteristics. For instance, in Spain each company reports their own payments to individual health professionals on their own websites, which makes research on the adequacy of disclosure difficult and unreliable. In the UK there is a single database –belonging to the Association of the British Pharmaceutical Industry–, but healthcare professionals must consent to have their names reported: the consent rate was only 65% in 2016<sup>19</sup>. Consent is also needed in Germany, Italy and Sweden<sup>18</sup>.

If not disclosing all authors potential Col in journal articles is ethically unacceptable, such behavior is worse when dealing with authors of clinical practice guidelines, that are commonly suggested by professional societies/associations and governmental bodies to be followed by practicing physicians. A remarkable percentage of Col's disclosure of authors of highly respected professional associations' clinical practice guidelines were inaccurate or simply lacking<sup>20–22</sup>. Proposals for full transparent and comprehensive potential Col disclosure and to prevent inconsistent reporting of author's Col's disclosures have been put forward<sup>23,24</sup>.

However, the current practice of disclosure by filling in standard forms for each submitted paper does not seem to be effective in increasing Col transparency, since 61% of authors had at least one industry payment type not disclosed with a submitted article<sup>25</sup>.

It has been observed that physicians accepting inexpensive meals from pharma companies prescribe more brand names medicines<sup>26</sup>, and that greater payments were associated with greater proportion of branded prescriptions<sup>27</sup>. What might be expected from editors that receive industry payments and could be involved in assessing manuscripts of industry-

sponsored trials? The ICMJE Recommendations state that editors should recuse themselves from editorial decisions when they have potential CoIs<sup>7</sup>. Thus, authors and readers have to presume that this happens if this is a journal's policy. Unfortunately, only 57% (34/60) of influential US journals<sup>28</sup> and 18% of journals listed as followers of the ICMJE Recommendations<sup>16</sup> have a publicly available editor's CoI policy. So, in the best-case scenario, where all journals with editors' CoI policy have a recusal statement that is always followed, there is still a risk that editors of many journals with industry ties could engage in editorial decisions with manuscripts for which they have a conflict.

While many journals have addressed the disclosure of authors' potential CoI disclosure, few have had a similar approach to editors' CoIs. The decision taken by the editors of 18 orthopedic journals to agree to use the ICMJE form for disclosing authors' CoIs from 2011 onwards is laudable<sup>29</sup>, but as of January 2019 there has not been any such an agreement regarding editors' individual potential CoI disclosure. Similarly, Nature Research journals<sup>30</sup> and JAMA Network journals<sup>5</sup> have recently readdressed their authors' potential CoI disclosure requirements but have not done the same regarding editors' individual disclosures.

The limitations of this study are that all information was retrieved from journals that lead their respective medical specialties and logically the number was relatively small. However, and as mentioned above with respect to the percentage of ICMJE Recommendations followers that declared the individual authors' and editors' CoI, we should foresee that among all medical journals the percentage that require disclosure of these CoIs will be much smaller.

It is paradoxical that many journals ask for full authors' CoI disclosure, whereas almost all of them provide no publicly available information on their editors' potential CoIs. The 14 ICMJE member journals should lead the way in adhering to their own policies. This would mean that *JAMA* and *Lancet* would likely require their sister journals to follow the same policy, which would almost double (up to 23%) the percentage of journals in table 1 fulfilling the disclosure

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of individual editorial teams’ potential Col. But this is not enough. Journals that belong to professional societies/associations should also disclose their editorial teams’ individual potential Col. Finally, all journals that are listed as followers of the ICMJE Recommendations should behave accordingly and report their editors’ individual potential Col.

The publication process –as a critical part of the scientific enterprise– should be based on the honest behavior of all agents involved. Journal editorial teams are a key player that should apply to themselves the transparency they demand from their authors, by at least regularly updating their individual Cols declarations in an easily accessible place at the journal’s website.

### Authors' contributions

RD–R conceived the idea and wrote the first draft of the manuscript. RD–R retrieved all the data; AM checked consistency of all the information from a random sample of 25% of the 130 journals. ALC and AM provided comments and edits throughout the drafting process for important intellectual content. RD–R, ALC and AM approved the final version of the manuscript and are accountable for all aspects included in it. The authors assume full responsibility for the accuracy and completeness of the data and ideas presented.

### Funding

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors

### Competing interests

All authors declare that have neither financial nor non-financial interests that may be relevant to the submitted work. AM declares that she participated in the creation of the ICMJE Form for Disclosure of Potential Conflicts of Interest.

### Data sharing

All data are provided in Table 1

### Open access

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Table 1.- Authors’ requirements and provision of editors’ individual conflicts of interest (Col) disclosures in the websites of the 5 top ranked journals of 26 categories as per 2017 JCR impact factor (IF) and their link to a third party. Inclusion of journals in the ICMJE recommendations list of followers and as COPE members (as of 14 November 2018)

JCR Category	Journal	2017 IF	Linked <sup>a</sup> to a college, professional association / society or public institution	ICMJE recommendations follower <sup>b</sup>	COPE member <sup>b</sup>	Author’s Col individual disclosure required	Editor’s Col individual declaration provided
Allergy	Journal of Clinical Allergy and Clinical Immunology	13.3	Yes	Yes	Yes	Yes	No
	Journal of Clinical Allergy and Clinical Immunology in Practice	7.0	Yes	No	Yes	Yes	No
	Clinical Reviews in Allergy & Immunology	6.1	No	No	Yes	Yes	No
	Allergy	6,0	Yes	No	Yes	Yes	No
	World Allergy Organization Journal	5.7	Yes	No	Yes	Yes <sup>i</sup>	No
Anesthesiology	Anesthesiology	6.5	Yes	No	Yes	Yes	Yes
	British Journal of Anaesthesia	6.5	Yes	Yes	Yes	Yes	No
	Pain	5.6	Yes	Yes	Yes	Yes	No
	Anaesthesia	5.4	Yes	Yes	Yes	Yes	No
	Regional Anesthesia and Pain Medicine	4.7	Yes	Yes	Yes	Yes <sup>j</sup>	No
Cardiology & Cardiovascular Systems	European Heart Journal	23.4	Yes	Yes	Yes	Yes	No
	Circulation	18.9	Yes	Yes	No	Yes	No
	Journal of the American College of Cardiology	16.8	Yes	Yes	Yes	Yes	Yes <sup>k</sup>
	Circulation Research	15.2	Yes	No	Yes	Yes	No
	Nature Reviews Cardiology	15.2	No	No	Yes	Yes	No
Clinical Neurology	Lancet Neurology	27.1	No	No	Yes	Yes	No
	Nature Reviews Neurology	19.8	No	No	Yes	Yes	No
	Acta Neuropathologica	15.9	No	No	No	Yes	No

	Alzheimers & Dementia	12.8	Yes	No	Yes	Yes	No
	JAMA Neurology	11.5	Yes	Yes	No	Yes	No
Critical Care Medicine	Lancet Respiratory Medicine	21.5	No	No	Yes	Yes	No
	American Journal of Respiratory and Critical Care Medicine	15.2	No	Yes	Yes	Yes	Yes
	Intensive Care Medicine	15.0	Yes	No	Yes	Yes	No
	Chest	7.7	Yes	Yes	Yes	Yes	No
	Critical Care Medicine	6.6	Yes	No	Yes	Yes	No
Dermatology	JAMA Dermatology	8.1	Yes	Yes	No	Yes	No
	Journal of the American Academy of Dermatology	6.9	Yes	Yes	Yes	Yes	No
	Journal of Investigative Dermatology	6.4	Yes	No	Yes	Yes	No
	British Journal of Dermatology	6.1	Yes	No	Yes	Yes	No
	Pigment Cell & Melanoma Research	6.1	Yes	No	Yes	Yes	No
Endocrine & Metabolism	Cell Metabolism	20.6	No	No	Yes	Yes	No
	Nature Reviews Endocrinology	20.3	No	No	Yes	Yes	No
	Lancet Diabetes & Endocrinology	19.3	No	No	Yes	Yes	No
	Endocrine Reviews	15.6	Yes	No	Yes	Yes <sup>i</sup>	No
	Diabetes care	13.4	Yes	Yes	Yes	Yes	No
Gastroenterology & Hepatology	Gastroenterology	20.8	Yes	Yes	Yes	Yes	Yes
	Nature Reviews Gastroenterology & Hepatology	17.3	No	No	Yes	Yes	No
	Gut	17.0	No	Yes	Yes	Yes	Yes <sup>l</sup>
	Journal of Hepatology	15.0	Yes	Yes	Yes	Yes	No
	Hepatology	14.1	Yes	No	No	Yes	No
Hematology	Blood <sup>c</sup>	15.1	Yes	Yes	Yes	Yes	Yes
	Lancet Haematology	10.7	No	No	No	Yes	No
	Leukemia	10.0	No	No	Yes	Yes	No
	Haematologica	9.1	Yes	Yes	No	Yes	No
	Journal of Hematology & Oncology	7.3	Yes	No	Yes	Yes <sup>i</sup>	No

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Immunology	Nature Reviews Immunology	42.0	No	No	Yes	Yes	No
	Annual Review of Immunology	22.7	No	No	No	Yes <sup>i</sup>	No
	Nature Immunology	21.8	No	No	Yes	Yes <sup>i</sup>	No
	Immunity	19.7	No	No	Yes	Yes	No
	Trends in Immunology	14.2	No	No	No	Yes	No
Infectious Diseases	Lancet Infectious Diseases	25.1	No	No	Yes	Yes	No
	Lancet HIV	11.4	No	No	No	Yes	No
	Clinical Infectious Diseases	9.1	Yes	Yes	Yes	Yes	No
	Emerging Infectious Diseases	7.4	Yes	Yes	No	Yes	No
	Eurosurveillance	7.1	Yes	Yes	No	Yes	No
Medicine General & Internal	New England Journal of Medicine	79.3	Yes	Yes <sup>h</sup>	Yes	Yes	No
	Lancet	53.3	No	Yes <sup>h</sup>	Yes	Yes	No
	JAMA	47.7	Yes	Yes <sup>h</sup>	No	Yes	No
	BMJ	23.6	Yes	Yes <sup>h</sup>	Yes	Yes	Yes
	JAMA Internal Medicine	20.0	No	Yes	No	Yes	No
Obstetrics & Gynecology	Human Reproduction Update	11.9	Yes	No	Yes	Yes	No
	American Journal of Obstetrics and Gynecology	5.7	Yes	Yes	Yes	Yes	No
	Ultrasound in Obstetrics & Gynecology	5.7	Yes	No	Yes	Yes	No
	Human Reproduction	5.0	Yes	No	Yes	Yes	No
	Obstetrics and Gynecology	5.0	Yes	No	Yes	Yes	No
Oncology	CA-A Cancer Journal for Clinicians	244.6	Yes	No	Yes	Yes	Yes
	Nature Reviews Cancer	42.8	No	No	Yes	Yes	No
	Lancet Oncology	36.4	No	No	Yes	Yes	No
	Journal of Clinical Oncology	26.4	Yes	No	No	Yes	Yes
	Nature Reviews Clinical Oncology	24.7	No	No	Yes	Yes	No
Ophthalmology	Progress in Retinal and Eye Research	11.7	No	No	No	Yes	No
	Ophthalmology	7.5	Yes	Yes	No	Yes	No
	JAMA Ophthalmology	6.7	Yes	Yes	No	Yes	No
	Ocular Surface	5.5	No	No	No	Yes	No

	Annual Review of Vision Science	5.1	No	No	No	Yes <sup>i</sup>	No
Orthopedics	American Journal of Sports Medicine	6.1	Yes	No	Yes	Yes	No
	Osteoarthritis and Cartilage	5.5	Yes	Yes	Yes	Yes	No
	Journal of Bone and Joint Surgery - American Volume	4.6	No	No	Yes	Yes	Yes
	Journal of Physiotherapy	4.5	Yes	Yes	Yes	Yes	No
	Arthroscopy	4.3	Yes	No	No	Yes	No
Pediatrics	JAMA Pediatrics	10.8	Yes	Yes	No	Yes	No
	Journal of the American Academy of Child and Adolescent Psychiatry	6.2	Yes	Yes	Yes	Yes	No
	Pediatrics	5.5	Yes	Yes	Yes	Yes	No
	Pediatric Allergy and Immunology	4.1	Yes	No	Yes	Yes	No
	Journal of Adolescent Health	4.1	Yes	No	Yes	Yes	No
Peripheral Vascular Diseases	Hypertension <sup>d</sup>	6.8	Yes	Yes	Yes	Yes	No
	Stroke	6.2	Yes	Yes	Yes	Yes	No
	Arteriosclerosis thrombosis and Vascular Biology	6.1	Yes	No	Yes	Yes	No
	Thrombosis and Haemostasis	5.0	Yes	Yes	No	Yes	No
	Journal of Thrombosis and Haemostasis	4.9	Yes	Yes	Yes	Yes	No
Primary Health Care	Annals of Family Medicine	4.5	Yes	Yes	No	Yes	No
	British Journal of General Practice	3.3	Yes	No	Yes	Yes	No
	Journal of the American Board of Family Medicine	2.5	Yes	Yes	No	Yes	No
	npj Primary Care Respiratory Medicine	2.5	Yes	No	Yes	Yes	No
	BMC Family Practice	2.0	No	No	Yes	Yes <sup>i</sup>	No
Psychiatry	World Psychiatry	30.0	Yes	No	No	No	No
	JAMA Psychiatry	16.6	Yes	Yes	No	Yes	No
	Lancet Psychiatry	15.2	No	No	Yes	Yes	No
	American Journal of Psychiatry	13.4	Yes	Yes	No	Yes	No
	Psychotherapy and Psychosomatics	13.1	No	Yes	No	Yes	No

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Public, Environmental & Occupational Health	Lancet Global Health	18.7	No	No	Yes	Yes	No
	MMRW- Morbidity and Mortality Weekly Report	12.9	Yes	No	No	Yes	No
	Annual Review of Public Health	9.4	No	No	No	Yes <sup>i</sup>	No
	Environmental Health Perspectives	8.4	Yes	No	Yes	Yes	No
	International Journal of Epidemiology	8.4	Yes	Yes	Yes	Yes	No
Radiology, Nuclear Medicine & Medical Imaging	JACC-Cardiovascular Imaging	10.2	Yes	No	Yes	Yes	Yes <sup>k</sup>
	European Heart Journal-Cardiovascular Imaging	8.3	Yes	No	Yes	Yes	No
	European Journal of Nuclear Medicine and Molecular Imaging	7.7	Yes	No	Yes	Yes	No
	Radiology	7.5	Yes	Yes	No	Yes	No
	Journal of Nuclear Medicine	7.4	Yes	No	No	Yes	No
Respiratory System	European Respiratory Journal <sup>e</sup>	12.2	Yes	Yes	Yes	Yes	Yes
	Journal of Thoracic Oncology	10.3	Yes	No	Yes	Yes <sup>i</sup>	No
	Thorax	9.7	Yes	Yes	Yes	Yes	Yes <sup>m</sup>
	Journal of Heart and Lung Transplantation	8.0	Yes	No	Yes	Yes	No
	Journal of Thoracic and Cardiovascular Surgery	4.9	Yes	Yes	Yes	Yes	No
Rheumatology	Nature Reviews Rheumatology	15.7	No	No	Yes	Yes	No
	Annals of the Rheumatic Diseases	12.4	Yes	Yes	Yes	Yes	Yes <sup>l</sup>
	Arthritis & Rheumatology	7.8	Yes	No	Yes	Yes	No
	Rheumatology <sup>f</sup>	5.2	Yes	Yes	Yes	Yes	No
	Seminars in Arthritis and Rheumatism	4.4	No	No	Yes	Yes	No
Surgery	Annals of Surgery	9.2	Yes	Yes	Yes	Yes	No
	JAMA Surgery	8.5	Yes	Yes	No	Yes	No
	Journal of Neurology Neurosurgery and Psychiatry <sup>g</sup>	7.1	No	Yes	Yes	Yes	Yes <sup>l</sup>
	Endoscopy	6.6	No	Yes	No	Yes	No
	American Journal of Transplantation	6.5	Yes	Yes	Yes	Yes	No

Urology & Nephrology	European Urology	17.6	Yes	Yes	Yes	Yes	Yes
	Nature Reviews Nephrology	14.1	No	No	Yes	Yes	No
	Journal of the American Society of Nephrology	8.7	Yes	Yes	Yes	Yes	No
	Kidney International	8.4	Yes	No	Yes	Yes	No
	Nature Reviews Urology	8.1	No	No	Yes	Yes	No

- (a) Official journal, or affiliated to or published by or on behalf of; (b) Website information; (c) The journal ranked as # 1 is Circulation Research which is included in Cardiology & Cardiovascular Systems; (d) Journals ranked as # 1 and 2 are Circulation and Circulation Research which are included in Cardiology & Cardiovascular Systems; (e) The journals ranked as #1 and #2 are Lancet Respiratory Medicine and American Journal of Respiratory and Critical Care Medicine, which are included in Critical Care Medicine; (f) The journal ranked as #4 is Osteoarthritis and Cartilage, which included in Orthopedics; (g) The journal ranked as # 3 is Journal of Heart and Lung Transplantation which is included in Respiratory System; (h) ICMJE member journal; (i) Available through the editorial group websites (eg Annual Review author resource center; BMC editorial policies; Endocrine society; Nature authors & editors policies); (j) Available through the submission service site; (k) Including amount of US\$ (modest  $\leq$  5,000 \$, or significant  $\geq$  5,000 \$); (l) Only that of the editor (s) but no information is provided regarding deputy editors and associate editors; (m) Only of some editors but not from all members of the editorial team.

# BMJ Open

## Editors' and authors' individual conflicts of interest disclosure and journal transparency. A cross-sectional study of high-impact medical specialty journals

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2019-029796.R2
Article Type:	Research
Date Submitted by the Author:	04-Jul-2019
Complete List of Authors:	Dal Re, Rafael; Health Research Institute-Fundacion Jimenez Diaz University Hospital, ; Caplan, Arthur; New York University School of Medicine, Medical Ethics Marusic, Ana; University of Split, Department of Research in Biomedicine and Health
<b>Primary Subject Heading</b>:	Medical publishing and peer review
Secondary Subject Heading:	Ethics
Keywords:	conflicts of interest, editors, authors, medical journals, COPE, ICMJE

SCHOLARONE™  
Manuscripts

**Editors’ and authors’ individual conflicts of interest disclosure and journal transparency. A cross-sectional study of high–impact medical specialty journals**

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*No. of words: 1987.*

*No. of tables: 1*



## Abstract

**Objective:** To assess the fulfilment of authors' and editors' individual disclosure of potential conflicts of interest in a group of highly influential medicine journals across a variety of specialties.

**Design:** Cross sectional analysis.

**Setting and participants:** Top-ranked 5 journals as per 2017 JCR impact factor of 26 medical, surgery and imaging specialties.

**Interventions:** Observational analysis

**Primary and secondary outcome measures:** Percentage of journals requiring disclosure of authors' and editors' individual potential conflicts of interest. Journals that were listed as followers of the International Committee of Medical Journal Editors (ICMJE) Recommendations, members of the Committee of Publication Ethics (COPE) and linked to a third party (i.e., college, professional association/society, public institution).

**Results:** Although 99% (129/130) of journals required author's Col disclosure, only 12% (16/130) reported individual editors' potential Cols. Forty-five percent (58/130) of journals were followers of the ICMJE Recommendations, and 73% (95/130) were COPE members. Most (69%; 90/130) were linked to a college, professional society/association or public institution. Only one journal did not have policies on individual authors' and editors' Col disclosure.

**Conclusion:** Very few high-impact medical journals disclosed their editorial teams' individual potential conflicts of interest –conversely, almost all required disclosure of authors' individual conflicts of interest. Journal followers of the ICMJE Recommendations and/or COPE members should regularly disclose the editors' individual conflicts of interest, as this is the only legitimate way to ask the same transparency of authors.

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**Strengths and limitations of this study**

- This is the first study comparing authors’ and editors’ individual disclosure of potential conflicts of interest in 130 leading journals from 26 medical specialties
- A limitation is that we did not assess a representative sample of the whole population of medical journals. Also, we included only the information available in the public domain (journals’ websites).
- The results obtained in this study may be an overestimation of how many journals require and comply with disclosure of authors’ and editors’ individual potential conflicts of interest.

Recent highly publicized cases<sup>1,2</sup> illustrated what has been suspected for many years, that many researchers do not appropriately disclose their financial conflicts of interest (Col), let alone disclose non-financial Cols, about which there are differing opinions<sup>3</sup> and lack of clear policies in most medical journals<sup>4</sup>.

The implementation of the Sunshine Act in the USA in 2013 reveals all industry payments received by all physicians practicing in the US through the Centers For Medicare & Medicaid Services Open Payments Database (OPD; <https://www.cms.gov/openpayments/>). A study showed that 32% of oncologists working in the US and authors of clinical trials articles published in 6 highly-influential journals (4 oncology or hematology journals), failed to completely disclose industry payments from the company that sponsored the trials<sup>5</sup>.

Although authors' failure to disclose potential Col is of grave concern, matters are worse when it comes to disclosure by editors and editorial teams. COPE (Committee on Publication Ethics) –a highly respected professional committee providing leadership to editors, publishers and individuals on ethical publishing practices–recommends that “editorial Col should be declared, ideally publicly”<sup>6</sup>. The hugely influential International Committee of Medical Journal Editors (ICMJE) Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals –which are followed by thousands of scholarly journals– state that editors should publish “regular disclosure statements” about their own potential Cols and those of their staff, and that guest editors should follow the same standards<sup>7</sup>. This policy, however, is almost never followed. A review of the information in English posted on the websites of the 14 journal members of the ICMJE, showed that only two of them (*PLOS Medicine*, *The BMJ*) published individual declarations on editors' potential Cols<sup>8</sup>. A third ICMJE member journal (*Annals of Internal Medicine*), published its editorial team members' potential Cols in on-line published original research articles, special articles and reviews as “editors' disclosure” within the “author, article and disclosure information”.

Practicing physicians working as journal editors may receive industry payments and, hence, these financial CoIs should be disclosed to readers. Prior studies showed close to 50% of US clinicians belonging to editorial teams in top-ranked medicine journals have received payments from industry<sup>9-11</sup>.

The aim of this study was to assess the fulfilment of authors' and editors' individual disclosure of potential CoI in a group of highly influential medicine journals across a variety of specialties.

**Methods**

In November 2018 we searched the websites of highly influential journals for the policies on authors' and individual editors' potential CoI. These were the 5 top ranked journals according to their 2017 Journal Citation Report (JCR) impact factor, in each of 26 different JCR categories within medicine, surgery and imaging. The search was conducted by alphabetical order of the JCR categories. If a journal was included in one category and was found to be in the top 5 of a subsequent category, the next journal of the top list of the latter category was included to avoid duplication. This resulted in the inclusion of 130 different journals.

The following data were retrieved: journal name; 2017 impact factor; journal link to a third party, i.e., college, professional association or society or linked to a public institution, since this indicated the responsibility of a non-commercial organization for a journal; if the journal was included at the ICMJE website as a follower of the ICMJE Recommendations; and if the journal was included on the COPE website as a member. A quality check process is required for COPE membership, but not for ICMJE Recommendations listing. In addition, at each journal website we searched if there were information for author's individual CoI disclosure at the time of manuscript submission and whether the journal provided individual editorial CoI declarations. This included all usual editorial positions, such as editors-in-chief, executive editors, deputy editors, and associate editors or their equivalent. We presumed that these job positions would be involved in the editorial decision-making process. Data were retrieved by one of the

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2  
3 authors, RDR; all the information from a random sample of 25% of the 130 journals was  
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5 assessed by another author, AM, to check consistency of the retrieved data.  
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7 Patients and public involvement: Neither patients nor any member of the public were involved  
8  
9 in this study.  
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## 11 12 **Results**

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14 As shown in table 1, 99% (129/130) of journals required authors' Col disclosure, but only 12%  
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16 (16/130) reported individual editors' potential Cols. There were 10 categories (out of the 26)  
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18 with one journal reporting individual editors' potential Cols, and three other categories  
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20 (Gastroenterology & Hepatology, Oncology and Respiratory Medicine) with two journals  
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22 providing this information. Half of the categories (13/26) had no journal providing public  
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24 disclosure of individual editors' Cols. Only one journal (*World Psychiatry*) did not have policies  
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26 on both authors' *and* editors' individual Col disclosure. Out of 130 journals in the sample, 58  
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28 (45%) were listed on the ICMJE Recommendations subscription list, and 95 (73%) were COPE  
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30 members. Thirty-eight (29%) were both ICMJE Recommendations subscribers and COPE  
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32 members –four of them belonging to Anesthesia. Six categories had no journals subscribed to  
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34 both ICMJE Recommendations and COPE. Fifteen journals (11.5%) –belonging to 11  
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36 categories– were neither followers of the ICMJE Recommendations nor COPE members. None  
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38 of the five journals in the Immunology or Oncology categories were followers of the ICMJE  
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40 Recommendations. None of the five Ophthalmology journals were COPE members.  
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42 A majority of journals in the sample (69%; 90/130) were linked to a college, professional  
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44 society/association or public institution. Seven of the 26 categories had all five journals tied to  
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46 a third party, whereas only one (Immunology) had five journals with no link to a third party.  
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48 The two journals that were linked to a public institution were Emerging Infectious Diseases  
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50 (from the US Centers for Disease Control and Prevention, CDC) and Eurosurveillance (that  
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52 belongs to the European Centre for Disease Prevention and Control, ECDC).  
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With regards to individual editors' Col declarations, journal members of COPE and/or of the ICMJE Recommendations subscribers were not better in disclosures than other journals. Among those 16 journals that declared individual editors' Cols, ten were both followers of the ICMJE Recommendations and COPE members; the *Journal of Clinical Oncology*, was neither a follower of the ICMJE Recommendations nor was a member of COPE. None of the 22 journals listed in table 1 belonging to the *Lancet*, *JAMA* or *Nature Reviews* journal groups reported individual editors' potential Col. Two journals belonging to the same group (*Journal of the American College of Cardiology* and *JACC: Cardiovascular Imaging*) were the only ones reporting the dollar amount received (modest or significant; threshold: 5,000\$) by each member of the editorial team. Finally, four journals belonging to the BMJ Group reported Cols for one (*Annals of the Rheumatic Diseases*, *Gut*, and *Journal of Neurology Neurosurgery*) or three (*Thorax*) editors –but not of all of them– whereas *The BMJ* reported individual potential Cols for all members of its editorial team.

**Discussion**

This study conducted on 130 high–impact medical journals from 26 medical JCR categories showed that although almost all (99%) required authors to disclose potential Cols at the time of manuscript submission, but only 12% reported individual editors' potential Cols. Editors' disclosure rarely happened among journals that, in 88.5% of cases, were followers of the ICMJE Recommendations and/or COPE members, which recommend regular disclosure of editorial Col.

The situation in the rest of the thousands of journals that are included in the list of followers of the ICMJE Recommendations is even worse. We have shown previously that in a random sample of 350 journals only 1% (2/350) of the journal websites had declarations on individual editors' potential Cols, whereas 82% (287/350) required disclosure of authors' Cols<sup>12</sup>.

The US OPD has shed light on editors' Col by providing data on the payments by industry to journal editors also working as clinicians in the US. In 2014, 51% and 20% of 713 of clinicians

working as editors in 52 top medicine journals in 25 different specialties received general payments (eg, consultancy, honorariums, meals, travel) and research payments from industry, respectively<sup>9</sup>. Although the monetary values varied substantially across specialties and journals, there were five editors that received general payments between US\$ 325,000 and US\$ 11 million in one year<sup>9</sup>. In 2015, 46% (320/703) of editors from 60 influential US journals in 6 medical specialties received general payments from industry, of whom 48% (152/320) received payments of more than US\$ 5,000 –the threshold considered significant by the NIH<sup>10</sup>. In 2013–2016, 42% (141/333) of US-based physician–editors working in 35 journals with the highest number of citations in 2015 in seven medical specialties, received industry payments within any given year<sup>11</sup>. Median general payments to editors were mostly higher compared to all physicians within the same specialty<sup>11</sup>. Close to half of the editors of well-respected US journals received industry payments, but very few disclosed them. However, the use of the US OPD does not provide a complete picture since this database does not include payments to physician members of company corporate boards or payments from companies whose products have not been marketed<sup>13</sup>.

The situation in the EU is unknown. France, Latvia and Portugal have regulations mandating the transparent reporting of payments by industry to healthcare professionals<sup>14</sup>. In other EU countries, including Germany, Italy, Spain, Sweden, the Netherlands and the UK, industry self-regulations are in place<sup>14</sup>.

It has been observed that physicians accepting inexpensive meals from pharma companies prescribe more brand names medicines<sup>15</sup>, and that greater payments were associated with greater proportion of branded prescriptions<sup>16</sup>. What might be expected from editors that receive industry payments and could be involved in assessing manuscripts of industry-sponsored trials? The ICMJE Recommendations state that editors should recuse themselves from editorial decisions when they have potential Cols<sup>7</sup>. Thus, authors and readers have to presume that this happens if this is a journal's policy. Unfortunately, only 57% (34/60) of

influential US journals<sup>17</sup> and 18% of journals listed as followers of the ICMJE Recommendations<sup>12</sup> have a publicly available editor’s Col policy. So, in the best-case scenario, where all journals with editors’ Col policy have a recusal statement that is always followed, there is still a risk that editors of many journals with industry ties could engage in editorial decisions with manuscripts for which they have a conflict.

While many journals have addressed the disclosure of authors’ potential Col disclosure, few have had a similar approach to editors’ Cols. The decision taken by the editors of 18 orthopedic journals to agree to use the ICMJE form for disclosing authors’ Cols from 2011 onwards is laudable<sup>18</sup>, but as of January 2019 there has not been any such an agreement regarding editors’ individual potential Col disclosure. Similarly, Nature Research journals<sup>19</sup> and JAMA Network journals<sup>20</sup> have recently readdressed their authors’ potential Col disclosure requirements but have not done the same regarding editors’ individual disclosures.

The limitations of this study are that all information was retrieved from journals that lead their respective medical specialties and logically the number was relatively small. However, and as mentioned above with respect to the percentage of ICMJE Recommendations followers that declared the individual authors’ and editors’ Col, we should foresee that among all medical journals the percentage that require disclosure of these Cols will be much smaller.

It is paradoxical that many journals ask for full authors’ Col disclosure, whereas almost all of them provide no publicly available information on their editors’ potential Cols. The 14 ICMJE member journals should lead the way in adhering to their own policies. Journals that belong to professional societies/associations should also disclose their editorial teams’ individual potential Col. Finally, all journals that are listed as followers of the ICMJE Recommendations should behave accordingly and report their editors’ individual potential Col.

The publication process –as a critical part of the scientific enterprise– should be based on the transparent behavior of all agents involved. Journal editorial teams are a key player that



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3 should apply to themselves the transparency they demand from their authors, by at least  
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5 regularly updating their individual CoIs declarations in an easily accessible place at the  
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7 journal's website.  
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**Authors’ contributions**

RD–R conceived the idea and wrote the first draft of the manuscript. RD–R retrieved all the data; AM checked consistency of all the information from a random sample of 25% of the 130 journals. ALC and AM provided comments and edits throughout the drafting process for important intellectual content. RD–R, ALC and AM approved the final version of the manuscript and are accountable for all aspects included in it. The authors assume full responsibility for the accuracy and completeness of the data and ideas presented.

**Funding**

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors

**Competing interests**

All authors declare that have neither financial nor non-financial interests that may be relevant to the submitted work. AM declares that she participated in the creation of the ICMJE Form for Disclosure of Potential Conflicts of Interest.

**Data sharing**

All data are provided in Table 1

**Open access**

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Table 1.- Authors’ requirements and provision of editors’ individual conflicts of interest (Col) disclosures in the websites of the 5 top ranked journals of 26 categories as per 2017 JCR impact factor (IF) and their link to a third party. Inclusion of journals in the ICMJE recommendations list of followers and as COPE members (as of 14 November 2018)

<i>JCR Category</i>	<i>Journal</i>	<i>2017 IF</i>	<i>Linked<sup>a</sup> to a college, professional association / society or public institution</i>	<i>ICMJE recommendations follower<sup>b</sup></i>	<i>COPE member<sup>b</sup></i>	<i>Author’s Col individual disclosure required</i>	<i>Editor’s Col individual declaration provided</i>
Allergy	Journal of Clinical Allergy and Clinical Immunology	13.3	Yes	Yes	Yes	Yes	No
	Journal of Clinical Allergy and Clinical Immunology in Practice	7.0	Yes	No	Yes	Yes	No
	Clinical Reviews in Allergy & Immunology	6.1	No	No	Yes	Yes	No
	Allergy	6.0	Yes	No	Yes	Yes	No
	World Allergy Organization Journal	5.7	Yes	No	Yes	Yes <sup>i</sup>	No
Anesthesiology	Anesthesiology	6.5	Yes	No	Yes	Yes	Yes
	British Journal of Anaesthesia	6.5	Yes	Yes	Yes	Yes	No
	Pain	5.6	Yes	Yes	Yes	Yes	No
	Anaesthesia	5.4	Yes	Yes	Yes	Yes	No
	Regional Anesthesia and Pain Medicine	4.7	Yes	Yes	Yes	Yes <sup>j</sup>	No
Cardiology & Cardiovascular Systems	European Heart Journal	23.4	Yes	Yes	Yes	Yes	No
	Circulation	18.9	Yes	Yes	No	Yes	No
	Journal of the American College of Cardiology	16.8	Yes	Yes	Yes	Yes	Yes <sup>k</sup>
	Circulation Research	15.2	Yes	No	Yes	Yes	No
	Nature Reviews Cardiology	15.2	No	No	Yes	Yes	No
Clinical Neurology	Lancet Neurology	27.1	No	No	Yes	Yes	No

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	Nature Reviews Neurology	19.8	No	No	Yes	Yes	No
	Acta Neuropathologica	15.9	No	No	No	Yes	No
	Alzheimers& Dementia	12.8	Yes	No	Yes	Yes	No
	JAMA Neurology	11.5	Yes	Yes	No	Yes	No
Critical Care Medicine	Lancet Respiratory Medicine	21.5	No	No	Yes	Yes	No
	American Journal of Respiratory and Critical Care Medicine	15.2	No	Yes	Yes	Yes	Yes
	Intensive Care Medicine	15.0	Yes	No	Yes	Yes	No
	Chest	7.7	Yes	Yes	Yes	Yes	No
	Critical Care Medicine	6.6	Yes	No	Yes	Yes	No
Dermatology	JAMA Dermatology	8.1	Yes	Yes	No	Yes	No
	Journal of the American Academy of Dermatology	6.9	Yes	Yes	Yes	Yes	No
	Journal of Investigative Dermatology	6.4	Yes	No	Yes	Yes	No
	British Journal of Dermatology	6.1	Yes	No	Yes	Yes	No
	Pigment Cell & Melanoma Research	6.1	Yes	No	Yes	Yes	No
Endocrine & Metabolism	Cell Metabolism	20.6	No	No	Yes	Yes	No
	Nature Reviews Endocrinology	20.3	No	No	Yes	Yes	No
	Lancet Diabetes & Endocrinology	19.3	No	No	Yes	Yes	No
	Endocrine Reviews	15.6	Yes	No	Yes	Yes <sup>i</sup>	No
	Diabetes care	13.4	Yes	Yes	Yes	Yes	No
Gastroenterology & Hepatology	Gastroenterology	20.8	Yes	Yes	Yes	Yes	Yes
	Nature Reviews Gastroenterology & Hepatology	17.3	No	No	Yes	Yes	No
	Gut	17.0	No	Yes	Yes	Yes	Yes <sup>l</sup>
	Journal of Hepatology	15.0	Yes	Yes	Yes	Yes	No
	Hepatology	14.1	Yes	No	No	Yes	No
Hematology	Blood <sup>c</sup>	15.1	Yes	Yes	Yes	Yes	Yes

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	Lancet Haematology	10.7	No	No	No	Yes	No
	Leukemia	10.0	No	No	Yes	Yes	No
	Haematologica	9.1	Yes	Yes	No	Yes	No
	Journal of Hematology & Oncology	7.3	Yes	No	Yes	Yes <sup>i</sup>	No
Immunology	Nature Reviews Immunology	42.0	No	No	Yes	Yes	No
	Annual Review of Immunology	22.7	No	No	No	Yes <sup>i</sup>	No
	Nature Immunology	21.8	No	No	Yes	Yes <sup>i</sup>	No
	Immunity	19.7	No	No	Yes	Yes	No
	Trends in Immunology	14.2	No	No	No	Yes	No
Infectious Diseases	Lancet Infectious Diseases	25.1	No	No	Yes	Yes	No
	Lancet HIV	11.4	No	No	No	Yes	No
	Clinical Infectious Diseases	9.1	Yes	Yes	Yes	Yes	No
	Emerging Infectious Diseases	7.4	Yes	Yes	No	Yes	No
	Eurosurveillance	7.1	Yes	Yes	No	Yes	No
Medicine General & Internal	New England Journal of Medicine	79.3	Yes	Yes <sup>h</sup>	Yes	Yes	No
	Lancet	53.3	No	Yes <sup>h</sup>	Yes	Yes	No
	JAMA	47.7	Yes	Yes <sup>h</sup>	No	Yes	No
	BMJ	23.6	Yes	Yes <sup>h</sup>	Yes	Yes	Yes
	JAMA Internal Medicine	20.0	No	Yes	No	Yes	No
Obstetrics & Gynecology	Human Reproduction Update	11.9	Yes	No	Yes	Yes	No
	American Journal of Obstetrics and Gynecology	5.7	Yes	Yes	Yes	Yes	No
	Ultrasound in Obstetrics & Gynecology	5.7	Yes	No	Yes	Yes	No
	Human Reproduction	5.0	Yes	No	Yes	Yes	No
	Obstetrics and Gynecology	5.0	Yes	No	Yes	Yes	No
Oncology	CA-A Cancer Journal for Clinicians	244.6	Yes	No	Yes	Yes	Yes
	Nature Reviews Cancer	42.8	No	No	Yes	Yes	No
	Lancet Oncology	36.4	No	No	Yes	Yes	No



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	Journal of Clinical Oncology	26.4	Yes	No	No	Yes	Yes
	Nature Reviews Clinical Oncology	24.7	No	No	Yes	Yes	No
Ophthalmology	Progress in Retinal and Eye Research	11.7	No	No	No	Yes	No
	Ophthalmology	7.5	Yes	Yes	No	Yes	No
	JAMA Ophthalmology	6.7	Yes	Yes	No	Yes	No
	Ocular Surface	5.5	No	No	No	Yes	No
	Annual Review of Vision Science	5.1	No	No	No	Yes <sup>i</sup>	No
Orthopedics	American Journal of Sports Medicine	6.1	Yes	No	Yes	Yes	No
	Osteoarthritis and Cartilage	5.5	Yes	Yes	Yes	Yes	No
	Journal of Bone and Joint Surgery - American Volume	4.6	No	No	Yes	Yes	Yes
	Journal of Physiotherapy	4.5	Yes	Yes	Yes	Yes	No
	Arthroscopy	4.3	Yes	No	No	Yes	No
Pediatrics	JAMA Pediatrics	10.8	Yes	Yes	No	Yes	No
	Journal of the American Academy of Child and Adolescent Psychiatry	6.2	Yes	Yes	Yes	Yes	No
	Pediatrics	5.5	Yes	Yes	Yes	Yes	No
	Pediatric Allergy and Immunology	4.1	Yes	No	Yes	Yes	No
	Journal of Adolescent Health	4.1	Yes	No	Yes	Yes	No
Peripheral Vascular Diseases	Hypertension <sup>d</sup>	6.8	Yes	Yes	Yes	Yes	No
	Stroke	6.2	Yes	Yes	Yes	Yes	No
	Arteriosclerosis thrombosis and Vascular Biology	6.1	Yes	No	Yes	Yes	No
	Thrombosis and Haemostasis	5.0	Yes	Yes	No	Yes	No
	Journal of Thrombosis and Haemostasis	4.9	Yes	Yes	Yes	Yes	No
Primary Health Care	Annals of Family Medicine	4.5	Yes	Yes	No	Yes	No
	British Journal of General Practice	3.3	Yes	No	Yes	Yes	No
	Journal of the American Board of Family Medicine	2.5	Yes	Yes	No	Yes	No

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	npj Primary Care Respiratory Medicine	2.5	Yes	No	Yes	Yes	No
	BMC Family Practice	2.0	No	No	Yes	Yes <sup>i</sup>	No
Psychiatry	World Psychiatry	30.0	Yes	No	No	No	No
	JAMA Psychiatry	16.6	Yes	Yes	No	Yes	No
	Lancet Psychiatry	15.2	No	No	Yes	Yes	No
	American Journal of Psychiatry	13.4	Yes	Yes	No	Yes	No
	Psychotherapy and Psychosomatics	13.1	No	Yes	No	Yes	No
Public, Environmental & Occupational Health	Lancet Global Health	18.7	No	No	Yes	Yes	No
	MMRW- Morbidity and Mortality Weekly Report	12.9	Yes	No	No	Yes	No
	Annual Review of Public Health	9.4	No	No	No	Yes <sup>i</sup>	No
	Environmental Health Perspectives	8.4	Yes	No	Yes	Yes	No
	International Journal of Epidemiology	8.4	Yes	Yes	Yes	Yes	No
Radiology, Nuclear Medicine & Medical Imaging	JACC-Cardiovascular Imaging	10.2	Yes	No	Yes	Yes	Yes <sup>k</sup>
	European Heart Journal-Cardiovascular Imaging	8.3	Yes	No	Yes	Yes	No
	European Journal of Nuclear Medicine and Molecular Imaging	7.7	Yes	No	Yes	Yes	No
	Radiology	7.5	Yes	Yes	No	Yes	No
	Journal of Nuclear Medicine	7.4	Yes	No	No	Yes	No
Respiratory System	European Respiratory Journal <sup>e</sup>	12.2	Yes	Yes	Yes	Yes	Yes
	Journal of Thoracic Oncology	10.3	Yes	No	Yes	Yes <sup>i</sup>	No
	Thorax	9.7	Yes	Yes	Yes	Yes	Yes <sup>m</sup>
	Journal of Heart and Lung Transplantation	8.0	Yes	No	Yes	Yes	No
	Journal of Thoracic and Cardiovascular Surgery	4.9	Yes	Yes	Yes	Yes	No
Rheumatology	Nature Reviews Rheumatology	15.7	No	No	Yes	Yes	No

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	Annals of the Rheumatic Diseases	12.4	Yes	Yes	Yes	Yes	Yes <sup>l</sup>
	Arthritis & Rheumatology	7.8	Yes	No	Yes	Yes	No
	Rheumatology <sup>f</sup>	5.2	Yes	Yes	Yes	Yes	No
	Seminars in Arthritis and Rheumatism	4.4	No	No	Yes	Yes	No
Surgery	Annals of Surgery	9.2	Yes	Yes	Yes	Yes	No
	JAMA Surgery	8.5	Yes	Yes	No	Yes	No
	Journal of Neurology Neurosurgery and Psychiatry <sup>g</sup>	7.1	No	Yes	Yes	Yes	Yes <sup>l</sup>
	Endoscopy	6.6	No	Yes	No	Yes	No
	American Journal of Transplantation	6.5	Yes	Yes	Yes	Yes	No
Urology & Nephrology	European Urology	17.6	Yes	Yes	Yes	Yes	Yes
	Nature Reviews Nephrology	14.1	No	No	Yes	Yes	No
	Journal of the American Society of Nephrology	8.7	Yes	Yes	Yes	Yes	No
	Kidney International	8.4	Yes	No	Yes	Yes	No
	Nature Reviews Urology	8.1	No	No	Yes	Yes	No

- (a) Official journal, or affiliated to or published by or on behalf of; (b) Website information; (c) The journal ranked as # 1 is Circulation Research which is included in Cardiology & Cardiovascular Systems; (d) Journals ranked as # 1 and 2 are Circulation and Circulation Research which are included in Cardiology & Cardiovascular Systems; (e) The journals ranked as #1 and #2 are Lancet Respiratory Medicine and American Journal of Respiratory and Critical Care Medicine, which are included in Critical Care Medicine; (f) The journal ranked as #4 is Osteoarthritis and Cartilage, which included in Orthopedics; (g) The journal ranked as # 3 is Journal of Heart and Lung Transplantation which is included in Respiratory System; (h) ICMJE member journal; (i) Available through the editorial group websites (eg Annual Review author resource center; BMC editorial policies; Endocrine society; Nature authors & editors policies); (j) Available through the submission service site; (k) Including amount of US\$ (modest  $\leq$  5,000 \$, or significant  $\geq$  5,000 \$); (l) Only that of the editor (s) but no information is provided regarding deputy editors and associate editors; (m) Only of some editors but not from all members of the editorial team.